

C l a i m s

1. A device for a dispensing valve (4) in a pipe (2), the pipe (2) being connected, when in its position of use, to a receptacle containing a fluid at a pressure (P3), in which the valve (4) comprises:
- an activating element;
 - a sealing element (22; 40) which is force-transmittingly connected to the activating element; and
 - a valve seat (26; 42) against which the sealing element (22; 40) seals when the valve (4) is inactive and in its position of rest;
 - in which the pipe (2) at least is open in a first end (32) and contains at least:
 - a separate pressure balancing channel (12) communicating only with the ambient pressure (P1) of the pipe (2);
 - a suction channel (28) communicating with the first end (32) of the pipe (2) and with the valve (4), and which is closed at a second end (34) of the pipe (2);
 - and
 - said activating element in the form of a flexible membrane (6) attached internally in the pipe (2), and which separates the pressure balancing channel (12) from the suction channel (28);
 - in which the valve (4) is arranged to open to fluid outflow when the suction channel (28), via the first end (32) of the pipe (2), is supplied an underpressure (P2) which is less than said ambient pressure (P1) by a predetermined value, whereby the membrane (6) is exposed to a pressure difference (P1-P2) which activates and moves the membrane (6), thereby transmitting a valve-opening force to the sealing element (22; 40),

c h a r a c t e r i z e d i n t h a t t h e m e m b r a n e (6), t h e
s e a l i n g e l e m e n t (22; 40) a n d i t s v a l v e s e a t (26; 42) h a v e
a l e n g t h y s h a p e a n d e x t e n d i n t h e l o n g i t u d i n a l d i r e c t i o n
o f t h e p i p e (2); a n d

5 - w h e r e i n t h e o p p o s i t e l o n g s i d e s (8, 8') o f t h e m e m b r a n e
(6) a r e a t t a c h e d t o t h e i n s i d e (10) o f t h e p i p e (2) a n d
a t a d i s t a n c e f r o m e a c h o t h e r.

2. T h e d e v i c e a c c o r d i n g t o c l a i m 1,

c h a r a c t e r i z e d i n t h a t t h e l e n g t h y s e a l i n g
10 e l e m e n t (22) i s f o r c e - t r a n s m i t t i n g l y c o n n e c t e d t o t h e
l e n g t h y m e m b r a n e (6) v i a a l e n g t h y a n d a x i a l l y e x t e n d i n g
f i r s t v a l v e r i b (18) a t t a c h e d t o t h e m e m b r a n e (6) a n d
p r o j e c t i n g o u t w a r d t h e r e f r o m; a n d

- w h e r e i n t h e l e n g t h y v a l v e s e a t (26) c o m m u n i c a t e s w i t h
15 t h e p i p e (2) v i a a l e n g t h y a n d a x i a l l y e x t e n d i n g s e c o n d
v a l v e r i b (24) a t t a c h e d t o t h e i n s i d e (10) o f t h e p i p e
(2) a n d p r o j e c t i n g o u t w a r d t h e r e f r o m;

- w h e r e b y a n i n t e r n a l f l u i d o u t f l o w c h a n n e l (30), w h i c h
i s o p e n a t t h e s e c o n d e n d (34) o f t h e p i p e (2), i s
20 d e f i n e d b e t w e e n t h e m e m b r a n e (6), t h e i n s i d e (10) o f t h e
p i p e (2) a n d s a i d t w o v a l v e r i b s (18, 24).

(c f . f i g s . 1 b a n d 1 c)

3. T h e d e v i c e a c c o r d i n g t o c l a i m 1,

c h a r a c t e r i z e d i n t h a t t h e s e c o n d e n d (34)
25 o f t h e p i p e (2) i s c l o s e d , w h e r e b y t h e s u c t i o n c h a n n e l
(28) a l s o i s c l o s e d a t t h i s e n d;

- w h e r e i n t h e w a l l o f t h e p i p e (2) i s p r o v i d e d w i t h a n
a x i a l l y e x t e n d i n g a n d t h r o u g h - g o i n g s l i t (38) a r r a n g e d
v i s - à - v i s t h e s u c t i o n c h a n n e l (28), i n w h i c h o n e s l i t
30 s u r f a c e (40) o f t h e s l i t (38) c o n s t i t u t e s t h e l e n g t h y
s e a l i n g e l e m e n t , w h e r e a s t h e o t h e r s l i t s u r f a c e (42) o f

the slit (38) constitutes the lengthy valve seat; and
- wherein the sealing element (40) and the lengthy
membrane (6) are force-transmittingly connected via an
intermediate wall portion (44) of the pipe (2);

5 - whereby said two slit surfaces (40, 42) will move away
from each other and open to fluid outflow when the
suction channel (28) is supplied said valve-opening
underpressure (P2).

(cf. figs. 2a and 2b)

10 4. The device according to claim 3,
c h a r a c t e r i z e d i n that at least a
longitudinal portion and a perimeter portion of the pipe
(2) are enclosed by an outer tubular mantle (48; 48a;
48b), said portions including said dispensing valve (4);
15 - wherein a first end (40) of the mantle (48; 48a; 48b)
is attached sealingly against the pipe (2) in a region
between the first end (32) of the pipe (2) and its
dispensing valve (4), whereas a second end (52) of the
mantle (48; 48a; 48b) is open;
20 - whereby an external fluid outflow channel (56) is
defined between the pipe (2) and the outer mantle (48;
48a; 48b).

(cf. figs. 3a, 3b and 3c)

25 5. The device according to claim 4,
c h a r a c t e r i z e d i n that the outer tubular
mantle (48; 48a; 48b) is comprised of a separate outer
pipe (48a).

(cf. fig. 3b)

30 6. The device according to claim 5,
c h a r a c t e r i z e d i n that the outer pipe (48a)

is telescopically arranged, whereby the outer pipe (48a) is extensible and contractible in its longitudinal direction.

7. The device according to claim 4,
5 c h a r a c t e r i z e d i n that the outer tubular mantle (48b) is incorporated together with a longitudinal portion of the pipe (2) containing the valve (4).
(cf. fig. 3c)
8. The device according to any one of claims 4-7,
10 c h a r a c t e r i z e d i n that the second, open end (52) of the mantle (48; 48a; 48b) is shaped as a point (54), whereby the second end (52) of the mantle (48; 48a; 48b) may be readily inserted into said fluid receptacle.
9. The device according to any one of the preceding claims,
15 c h a r a c t e r i z e d i n that the second end (34) of the pipe (2) is shaped as a point (46), whereby the pipe (2) may be readily inserted into said fluid receptacle.
10. The device according to any one of the preceding claims,
20 c h a r a c t e r i z e d i n that the pressure balancing channel (12) is connected to at least one vent (16) communicating with the ambient pressure (P1) of the pipe (2).